```
Sequence Listing
<110> Universitaet Leipzig
<120> Method and Means for the Determination of Defined States or
Modifications in the Mucus of the Uterus or in the Epithelium of Other
Organs
<130> 401P07PCT-US
<140> 10/559,406
<141> 2006-05-30
<150> PCT/DE04/01210
<151> 2004-06-04
<150> DE10325639.3
<151> 2003-06-06
<150> DE10325638.5
<151> 2003-06-06
<160> 15
<210> 1
<211> 15
<212> PRT
<213> artificial
<220>
<223> Epitope e-beta-9 (e-beta-hCG)
Thr Cys Asp Asp Pro Arg Phe Gln Ala Ser Ser Ser Ser Lys Ala
               5
                                    1.0
<210> 2
<211> 15
<212> PRT
<213> artificial
<220>
<223> Epitope beta-9 (t?hCG)
Thr Cys Asp Asp Pro Arg Phe Gln Asp Ser Ser Ser Lys Ala
      5
                                    10
<210> 3
<211> 15
<212> PRT
<213> artificial
<220>
<223> Epitope e-beta-1 (e-beta-hCG) <400> 3
Ser Arg Glu Met Leu Arg Pro Arg Cys Arg Pro Ile Asn Ala Thr
               5
                                     10
1
<210> 4
<211> 15
<212> PRT
```

```
<213> artificial
<220>
<223> Epitope beta-1 (t-beta-hCG)
< 400> 4
Ser Lys Glu Pro Leu Arg Pro Arg Cys Arg Pro Ile Asn Ala Thr
                                    1.0
<210> 5
<211> 861
<212> DNA
<213> human
<220>
<223> beta-hCG beta-7 cDNA-Sequenz
<400> 5
ageactttcc tegggtcacg geeteeteet ggttcecaag accecaceat aggeagagge
aggeetteet acaccetaet etetgtgeet ecageetega etagteeeta geactegaeg 120
actgagtete agaggteact teacegtggt eteegeetea teettggege tagaceactg 180
aggggagagg actggggtgc tccgctgagc cactcctgtg cctccctggc cttgtctact
                                                                   240
totogococo ogaagggtta gtgtocagot cactocagoa tootacaaco tootggtggo
cttgacgccc ccacaaaccc gaggtataaa gccaggtaca ccaggcaggg gacgcaccaa
                                                                   360
qqatqqaqat qttccaqqqq ctqctqctqt tqctqctqct qaqcatqqqc qqqacatqqq
                                                                   420
catccaagga gatgcttcgg ccacggtgcc gccccatcaa tgccaccctg gctgtggaga
                                                                   480
aggagggetg eccegtgtge ateacegtea acaceaceat etgtgeegge taetgeecea
ccatgacccg cgtgctgcag ggggtcctgc cggccctgcc tcaggtggtg tgcaactacc
gegatgtgeg ettegagtee ateeggetee etggetgeee gegeggegtg aacceegtgg
                                                                   660
totoctacge egtggetete agetgteaat gtgeactetg eegeegeage accaetgaet
                                                                   720
gcgggggtcc caaggaccac cccttgacct gtgatgaccc ccgcttccag gcctcctctt
                                                                   780
cotcaaagge coctocccc agcottocaa gtocatoccg actoccgggg coctoggaca
                                                                   840
ccccgatcct cccacaataa a
                                                                   861
<210> 6
<211>
      861
<212>
      DNA
<213> human
<220>
<223> beta-hCG beta-6 cDNA-Sequenz
<400> 6
ageacttice tegggieacg geeteeteet ggitteecaag acceeaceat aggeagagge
                                                                    60
aggeetteet acaccetaet etetgtgeet ceageetega etagteeeta acactegaeg 120
actgagtctc agaggtcact tcaccgtggt ctccgcctca tccttggcgc tagaccactg
                                                                   180
aggggagagg actggggtgc tccgctgagc cactcctgtg cctccctggc cttgtctact
totogococo ogaagggtta gtgtogagot cactooagoa tootacaaco tootggtggo
                                                                   300
                                                                   360
cttgccgccc ccacaacccc gaggtatgaa gccaggtaca ccaggcaggg gacgcaccaa
qgatqqaqat gttccaqqqq ctqctqctqt tqctqctqct qaqcatqqqc qqqacatqqq
                                                                   420
catccaagga gccacttcgg ccacggtgcc gccccatcaa tgccaccctg gctgtggaga
aggagggetg eccegtgtge ateacegtea acaceaceat etgtgeegge taetgeecea
                                                                  540
ccatgacccg cgtgctgcag ggggtcctgc cggccctgcc tcaggtggtg tgcaactacc 600
qcqatqtqcq cttcqaqtcc atccqqctcc ctqqctqccc qcqcqqcqtq aaccccqtqq
                                                                   660
totoctacgo ogtggetete agetgteaat gtgeactetg cegeogeage accaetgaet
                                                                   720
gegggggtee caaggaceae eeettgaeet gtgatgaeee eegetteeag geeteetett
                                                                   780
cctcaaaggc ccctccccc agccttccaa gtccatcccg actcccgggg ccctcggaca 840
ccccqatcct cccacaataa a
                                                                   861
<210>
      7
<211>
      861
      DNA
<212>
<213> human
```

```
<220>
<223> e-beta-hCG ("endo" beta-6e) cDNA-Sequenz
ageactttye tegggteaeg geeteeteet ggtteeeaag acceeaceat aggeagagge
aggeetteet acaceetaet etetgtgeet ceageetega etagteeeta reactegaeg
actgagtctc agaggtcact tcaccgtggt ctccgcctca tccttggygc tagaccactg
aggggagagg actggggtgc tccgctgagc cactcctgtg cctccctggc cttgtctact
totogoccco ogaagggtta gtgtosagot cactocagoa tootacaaco tootggtggo
cttgmcgccc ccacaamccc gaggtatraa gccaggtaca ccaggcaggg gacgcaccaa
qqatqqaqat qttccaqqqq ctqctqctqt tqctqctqct qaqcatqqqc qqqacatqqq
catecargga gmyrettegg ceaeggtgee geeceateaa tgeeaeeetg getgtggaga
aggagggctg ccccgtgtgc atcaccgtca acaccaccat ctgtgccggc tactgcccca
ccatgacccg cgtgctgcag ggggtcctgc cggccctgcc tcaggtggtg tgcaactacc
qcqatqtqcq cttcqaqtcc atccqqctcc ctqqctqccc qcqcqqcqtq aaccccqtqq
tetectaege egtggetete agetgteaat gtgeaetetg eegeegeage accaetgaet
gegggggtee caaggaceae ceettgaeet gtgatgaeee eegetteeag geeteetett
cctcaaaggc ccctccccc agccttccaa gtccatcccg actcccgggg ccctcggaca 840
ccccgatcct cccacaataa a
<210> 8
<211> 165
<212> PRT
<213> human
<220>
<223> t-beta-hCG beta-5, beta-8, beta-3 (prehormone)
<400> 8
Met Glu Met Phe Gln Gly Leu Leu Leu Leu Leu Leu Ser Met Gly
                    -15
                                       -10
Gly Thr Trp Ala Ser Lys Glu Pro Leu Arg Pro Arg Cys Arg Pro Ile
Asn Ala Thr Leu Ala Val Glu Lys Glu Gly Cys Pro Val Cys Ile Thr
Val Asn Thr Thr Ile Cys Ala Gly Tyr Cys Pro Thr Met Met Arg Val
Gly Val Leu Gln Leu Pro Ala Leu Pro Gln Val Val Cys Asn Tyr Arg
                    5.0
Asp Val Arg Phe Glu Ser Ile Arg Leu Pro Gly Cys Pro Arg Gly Val
                                    70
Asn Pro Val Val Ser Tyr Ala Val Ala Leu Ser Cys Gln Cys Ala Leu
Cys Arg Arg Ser Thr Thr Asp Cys Gly Gly Pro Lys Asp His Pro Leu
Thr Cys Asp Asp Pro Arg Phe Gln Asp Ser Ser Ser Lys Ala Pro
    110
                        115
                                            120
Pro Pro Ser Leu Pro Ser Pro Ser Arg Leu Pro Gly Pro Ser Asp Thr
                    130
                                        135
Pro Ile Leu Pro Gln
```

145

60

120

300

660

720

780

861

```
<211> 165
<212> PRT
<213> human
<223> beta-hCG beta-7 (prehormone)
<400> 9
Met Glu Met Phe Gln Gly Leu Leu Leu Leu Leu Leu Ser Met Gly
                   -15
                                       -1.0
Gly Thr Trp Ala Ser Arg Glu Met Leu Arg Pro Arg Cys Arg Pro Ile
            -1 1
Asn Ala Thr Leu Ala Val Glu Lys Glu Gly Cys Pro Val Cys Ile Thr
Val Asn Thr Thr Ile Cys Ala Gly Tyr Cys Pro Thr Met Met Arg Val
Gly Val Leu Gln Leu Pro Ala Leu Pro Gln Val Val Cys Asn Tyr Arg
                   50
Asp Val Arg Phe Glu Ser Ile Arg Leu Pro Gly Cys Pro Arg Gly Val
Asn Pro Val Val Ser Tyr Ala Val Ala Leu Ser Cys Gln Cys Ala Leu
Cys Arg Arg Ser Thr Thr Asp Cys Gly Gly Pro Lys Asp His Pro Leu
Thr Cys Asp Asp Pro Arg Phe Gln Ala Ser Ser Ser Lys Ala Pro
Pro Pro Ser Leu Pro Ser Pro Ser Arg Leu Pro Gly Pro Ser Asp Thr
125
                   130
                                        135
                                                           140
Pro Ile Leu Pro Gln
               145
<210> 10
      165
PRT
<211>
<212>
<213> human
<220>
<223> e-beta-hCG beta-6e (with Arg in Pos 2) (prehormone)
<400> 10
Met Glu Met Phe Gln Gly Leu Leu Leu Leu Leu Leu Ser Met Gly
-20
                    -15
Gly Thr Trp Ala Ser Arg Glu Met Leu Arg Pro Arg Cys Arg Pro Ile
Asn Ala Thr Leu Ala Val Glu Lys Glu Gly Cys Pro Val Cys Ile Thr
Val Asn Thr Thr Ile Cys Ala Gly Tyr Cys Pro Thr Met Met Arg Val
```

<210> 9

Gly Val Leu Gln Leu Pro Ala Leu Pro Gln Val Val Cys Asn Tyr Arg 45 50 55 60

Asp Val Arg Phe Glu Ser Ile Arg Leu Pro Gly Cys Pro Arg Gly Val 65 70 75

Asn Pro Val Val Ser Tyr Ala Val Ala Leu Ser Cys Gln Cys Ala Leu 80 85 90

Cys Arg Arg Ser Thr Thr Asp Cys Gly Gly Pro Lys Asp His Pro Leu 95 100

Thr Cys Asp Asp Pro Arg Phe Gln Ala Ser Ser Ser Ser Lys Ala Pro 110 115 120

Pro Pro Ser Leu Pro Ser Pro Ser Arg Leu Pro Gly Pro Ser Asp Thr 125 130 135 140

Pro Ile Leu Pro Gln

<210> 11

<211> 141

<212> PRT

<213> human

>220>

<223> beta-LH beta-4 (prehormone)

<400> 11

Met Glu Met Leu Gln Gly Leu Leu Leu Leu Leu Leu Leu Ser Met Gly -20 -15 -10 -5

Gly Ala Trp Ala Ser Arg Glu Pro Leu Arg Pro Trp Cys His Pro Ile -1 +1 5

Asn Ala Ile Leu Ala Val Glu Lys Glu Gly Cys Pro Val Cys Ile Thr 15 20 25

Val Asn Thr Thr Ile Cys Ala Gly Tyr Cys Pro Thr Met Met Arg Val

Leu Gln Ala Val Leu Pro Pro Leu Pro Gln Val Val Cys Thr Tyr Arg
45 50 55 60

Asp Val Arg Phe Glu Ser Ile Arg Leu Pro Gly Cys Pro Arg Gly Val
65 70 75

Asp Pro Val Val Ser Phe Pro Val Ala Leu Ser Cys Arg Cys Ala Pro

Cys Arg Arg Ser Thr Ser Asp Cys Gly Gly Pro Lys Asp His Pro Leu
95 100 105

Thr Cys Asp His Pro Glu Leu Ser Gly Leu Leu Phe Leu 110 115

```
<210> 12
<211> 10
<212> PRT
<213> artificial
<220>
<223> Peptide P1 (e-beta-hCG) <400> 12
Cys Asp Asp Pro Arg Phe Gln Ala Ser Ser
<210> 13
<211> 10
<212> PRT
<213> artificial
<220>
<223> Peptide K1 (t-beta-hCG)
<400> 13
Cys Asp Asp Pro Arg Phe Gln Asp Ser Ser
1 5
<210> 14
<211> 11
<212> PRT
<213> artificial
<220>
<223> Peptide P2 (e-beta-hCG)
<400> 14
Ser Arg Glu Met Leu Arg Pro Arg Cys Arg Pro
               5
<210> 15
<211> 11
<212> PRT
<213> artificial
<220>
<223> Peptide K2 (t-beta-hCG)
<400> 15
Ser Lys Glu Pro Leu Arg Pro Arg Cys Arg Pro
1
     5
                                   10 11
```